

**REMARKS**

**I. Prosecution History**

Claim 1-22 were originally presented for examination on December 12, 2002. A restriction requirement dated August 12, 2003 was issued. Applicant canceled claims 1-22 and added new claims 23-44 via a Preliminary Amendment dated September 12, 2003, which rendered the restriction requirement moot.

A first office action was issued, dated November 13, 2003. In the first official action, claims 23-26, 28-29, 33-34, 36 and 38-41 were rejected under 35 USC 102 as being anticipated by U.S. Patent No. 6,425,695 to Murata et al; claim 32 was rejected under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,530,700 to Williams et al; and claims 27, 30-31, 35, 37, 43-44 were rejected under 35 USC 103(a) as being unpatentable over the Murata patent. Applicant filed an amendment and response on March 8, 2004 wherein claims 23, 26, 32-34, 38, and 43-44, and cancel claim 36. Claims 23-35 and 37-44 remained pending in the case.

In a second office action, made final, which is the subject of this responsive communication, claims 23-35 and 37-44 stand rejected again based on Murata and Williams. Claims 23-26, 28-29, 33-34, 36 and 38-42 stand rejected under 35 USC 102(e) as being anticipated by U.S. Patent No. 6,425,695 to Murata et al. Claims 27, 30-31, 35, 37 and 43-44 stand rejected under 35 USC 103(a) as being unpatentable over Murata et al. Claim 32 stand rejected under 35 USC 103(a) as being unpatentable over US patent No. 6,530,700 to Williams et al in view of Murata et al.

Applicant now cancels claims 33-35 and 37-44. Claims 23-32 remain pending in the present case.

**II. Invention Summarized.**

The present invention, as claimed in claims 23-32, enables “bi-direction communication of data” between electronic systems through an optical interface. The optical interface in accordance with claimed features of the present invention includes at least two

electro-optical components integrated into a common, encapsulated package. Optical components enabling bi-direction communications include at least one light emitter (e.g., VCSEL) and at least one light detector (e.g., photodetector); otherwise, communications could not be bi-directional. Ribbon fiberoptics can also be coupled to the optical interface in order to enable communications between electronic systems.

### III. Rejection under 35 USC 102 under Murata et al (U.S. Patent No. 6,425,695)

The Commissioner of Patents and Trademarks, acting through examining officials, bears the initial duty of supplying the factual basis supporting a rejection of a patent application, including a rejection based on anticipation. *In re Warner*, 379 F.2d 1011, 154 USPQ 173, 178 (C.C.P.A. 1967), *cert. denied*, 389 U.S. 1057 (1968). The courts have interpreted this initial duty as placing on the Commissioner and the examiner the burden of presenting a *prima facie* case of anticipation. See *In re King*, 801 F.2d 1324, 1327, 231 USPQ 136, 138-39 (Fed. Cir. 1986); *In re Wilder*, 429 F.2d 447, 450, 166 USPQ 545, 548 (C.C.P.A. 1970). As stated by the Board in *In re Skinner*, 2 USPQ 2d 1788, 1788-9 (B.P.A.I. 1986), "[i]t is by now well settled that the burden of establishing a *prima facie* case of anticipation resides with the Patent and Trademark Office."

A general definition of *prima facie* unpatentability is provided at 37 C.F.R. §1.56(b)(2)(ii):

A *prima facie* case of unpatentability is established when the information *compels a conclusion* that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability. (emphasis added)

"Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W.L. Gore & Associates v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983) (citing *Soundscriber Corp. v. United States*, 360 F.2d 954, 960, 148 USPQ 298, 301 (Ct. Cl.), *adopted*, 149 USPQ 640 (Ct. Cl. 1966)), *cert. denied*, 469

U.S. 851 (1984). Thus, to anticipate the applicants' claims, *Murata et al* must disclose each element recited therein. "There must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention." *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 18 USPQ 2d 1001, 1010 (Fed. Cir. 1991).

To overcome the anticipation rejection, the applicant need only demonstrate that not all elements of a *prima facie* case of anticipation have been met, *i. e.*, show that *Murata et al* fails to disclose every element in each of the applicant's claims. "If the examination at the initial state does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of the patent." *In re Oetiker*, 977 F.2d 1443, 24 USPQ 2d 1443, 1444 (Fed. Cir. 1992).

Claim 23-26 and 28-29 stand rejected under 25 USC 102 as being anticipated by U.S. Patent No. 6,425,695 to *Murata et al*. Examiner states that Murata discloses all the limitation of applicant's claims. According to Examiner, *Murata et al* provides "an optical interface (10) comprising at least two optical components (14, 64, 214, 264) integrated into a common optical package." All the optical elements cited by Examiner as found in *Murata et al*, however, fail to teach that the existence of a photodetector or other light receiving component. Nowhere in the *Murata et al* specification and drawings are light/signal receiving components described or shown. "Bi-directional" communication is not described anywhere in *Murata et al*.

Applicant's independent claims 23, 26 and 32 include language that his invention specifically provides "bi-directional communications" between systems. Applicant's specification describes that more than two optical electro-optical components provide bi-directional communications and that the components can include at least one semiconductor laser such as a VCSEL, and at least one photodetector. The applicant's "electro-optical" components are mounted and encapsulated, creating a common package similar to encapsulation used for laser diodes as explained in the detailed description.

The *Murata et al* components are only taught to include light transmissive components, such as surface emission lasers (14), commonly held on a substrate and three optical fibers (16) commonly held within the transmissive plan each laser. *Murata et al* is not

capable of providing bi-directional communications as taught. Only light transmission is taught within the Murata et al disclosure. For the foregoing reasons, the rejection of claims 23-26, 28-29, 33-34, and 38-41 is respectfully traversed. Applicant respectfully request reconsideration of these claims.

**IV. 35 USC 103 Rejection of claims 27, 30 and 31 as being unpatentable over Murata et al.**

The obligation of the examiner to go forward and produce reasoning and evidence in support of obviousness is clearly defined at M.P.E.P. §2142:

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

M.P.E.P. §2143 sets out the three basic criteria that a patent examiner must satisfy to establish a *prima facie* case of obviousness:

1. some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
2. a reasonable expectation of success; and
3. the teaching or suggestion of all the claim limitations by the prior art reference (or references when combined).

It follows that in the absence of such a *prima facie* showing of obviousness by the examiner (assuming there are no objections or other grounds for rejection), an applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443 (Fed. Cir. 1992).

Thus, in order to support an obviousness rejection, the Examiner is obliged to produce evidence compelling a conclusion that each of the three aforementioned basic criteria has been met. The applicant respectfully asserts that the rejection herein fails under the third

prong of the obviousness test because, for the reasons subsequently discussed against anticipation *infra*, that *Murata et al* does not teach bi-directional communications, nor the components that support such communications (e.g., photodetector and laser in a common package); therefore, if *Murata et al* does not teach or suggests all of the limitations set out in independent claims 23 and 26, then *Murata et al* also does not teach or suggest what is contained within dependent claims. For the foregoing reasons, the rejection of claims 27, 30 and 31 is respectfully traversed.

**V. 35 USC 103 Rejection of claim 32 under as unpatentable over Williams et al (U.S. Patent No. 6,530,700) in view of Murata et al.**

Claim 32 stands rejected under 35 USC 103 as being unpatentable over Williams et al (U.S. Patent No. 6,530,700) in view of Murata et al.

The applicant furthermore contends that the rejection fails to satisfy first prong because, in view of the objectives and teachings of the *Murata et al* reference, there is no motivation or suggestion contained therein to provide “bi-directional communications.” combine them. In this regard, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicants’ disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Moreover, 35 U.S.C. §103(a) states that

[a] patent may not be obtained . . . if the differences between the between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

to a person having ordinary skill in the art to which said subject matter pertains.

It is thus improper for the Examiner to formulate the suggestion or motivation to combine prior art references based on current knowledge. As stated by the Federal Circuit Court in the opinion of *In re Fritch*, 972 F.2d 1260, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992) (quoting *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988):

The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. Wilson and Hendrix fail to suggest any motivation for, or desirability of, the changes espoused by the Examiner and endorsed by the Board.

Here the Examiner relied upon hindsight to arrive at the determination of obviousness. It is impermissible to use the claimed invention as an instruction manual or 'template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that '[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.'

The foregoing comprises a caution against piecing together disparate and unrelated disclosures found in the prior art to meet a claimed structure, in the absence of any suggestion in the references implying the desirability of doing so.

Claim 32 was rejected as being anticipated by Williams et al. Although Williams teaches communication between a CPU and display monitor using a photonic package, Williams et al does not teach "providing a photonic package containing within an encapsulant at least one Vertical Cavity Surface Emitting Laser (VCSEL) and at least one photodetector." Applicant has amended claim 32 to best set forth its novelty of providing transmitting and receiving components (VCSEL, Photodetector) in a common, encapsulated package, similar to a laser diode as discussed in the specification.

The applicant respectfully asserts that, in view of the aforementioned guideline, combining *Murata et al* and *Williams* is improper and, therefore, a *prima facie* case of obviousness against Claim 32 cannot be established. In order to support an obviousness rejection, the Examiner is obliged to produce evidence compelling a conclusion that each of the three aforementioned basic criteria has been met. The applicant respectfully asserts that the rejection herein fails under the third prong of the obviousness test because, for the reasons subsequently discussed against anticipation *infra*, that *Murata et al* does not teach bi-directional communications, nor the components that support such communications (e.g., photodetector and laser in a common package); therefore, if *Murata et al* does not teach or suggests all of the limitations set out in independent claims 32, then *Murata et al* also does not teach or suggest what is contained within dependent claims. For the foregoing reasons,

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the rejection of claim 32 is respectfully traversed. Applicant respectfully requests reconsideration of claim 32.

**VI. Conclusion**

Applicant submits this amendment of his application to clarify the subject matter being claimed. Full support for the remaining claims can be found throughout the original specification and claims as filed. No new subject matter has been introduced as a result of this amendment.

Examiner can contact the following representative if questions regarding this preliminary amendment should arise prior to examination.

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